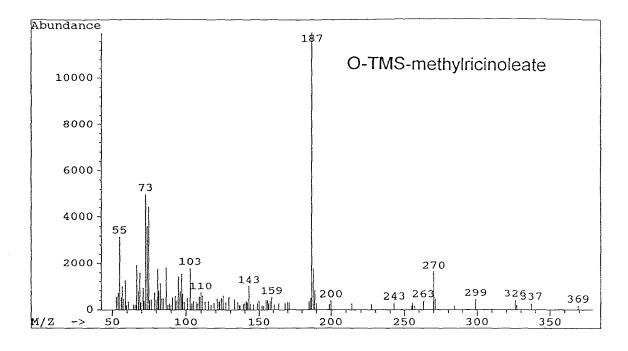
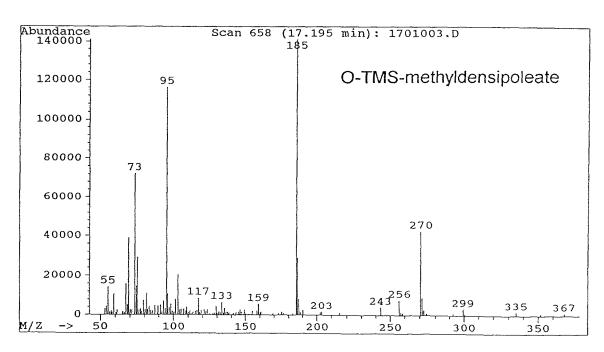
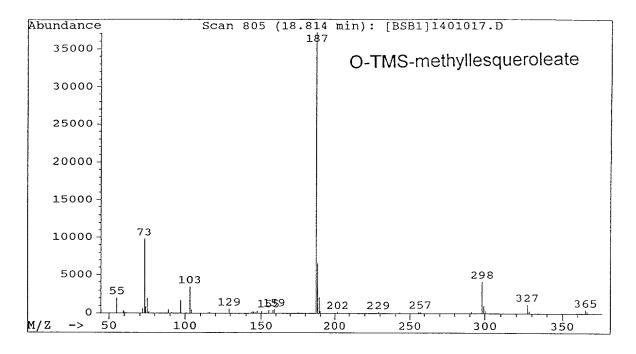
Figure 1A

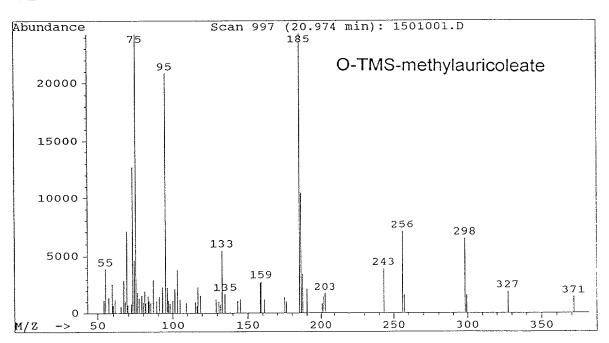


1B





1D



Ion #1: Mass 187 $\left[\text{CH}_3 - (\text{CH}_2)_5 - \text{CH-O-Si-}(\text{CH}_3)_3 \right]^+$

Ion #2: Mass 299

$$[(CH_3)_3$$
-Si-O-CH-CH₂-CH=CH- $(CH_2)_7$ -C-O-CH₃

Ion #3: Mass 270 (characteristic rearrangement ion)

Ion #4: Mass 185 (desaturated analog of Ion #1)

$$\left[\text{CH}_3 \text{-} (\text{CH}_2)_2 \text{-} \text{CH} = \text{CH-CH}_2 \text{-} \text{CH-O-Si-(CH}_3)_3 \right]^+$$

Ion #5: Mass 298 (elongated analog of Ion #3)

Ion #6: Mass 327 (elongated analog of ion

$$(CH_3)_3$$
-Si-O-CH-CH₂-CH=CH-(CH₂)₉-C-O-CH₃ +

Figure 2

Figure 3

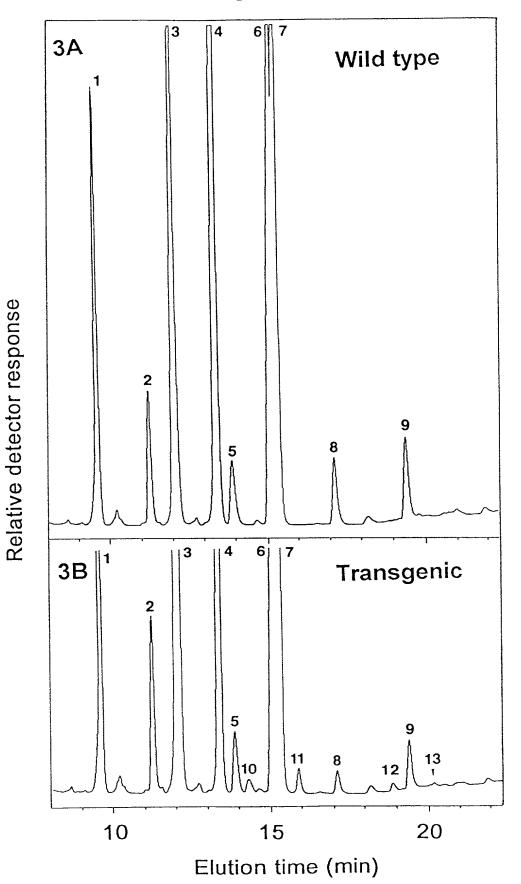
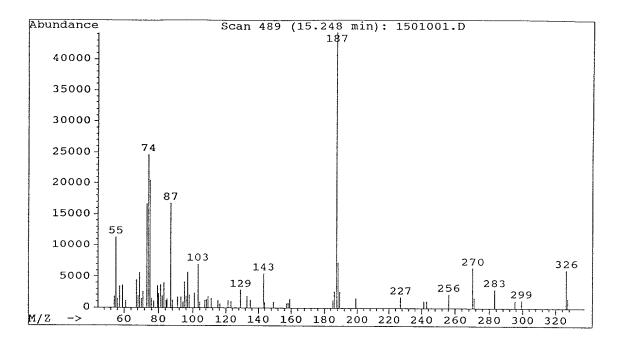
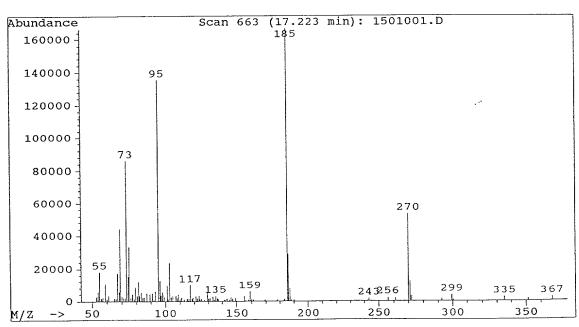
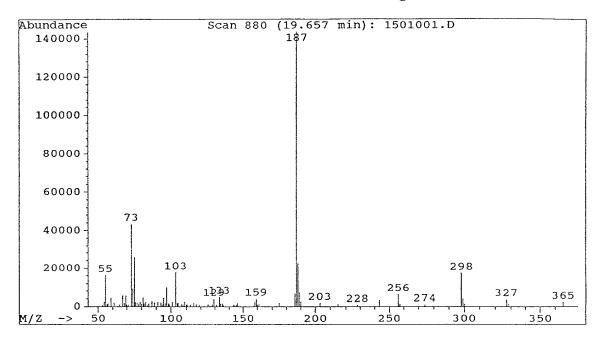


Figure 4A Mass spectrum of peak 10 from figure 3B

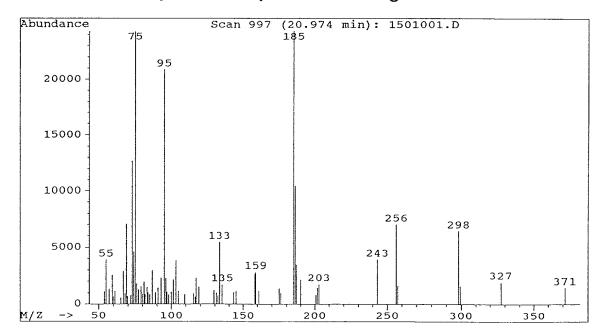


4B Mass spectrum of peak 11 from figure 3B





4D Mass spectrum of peak 13 from figure 3B



10	20	30	40	۲0	6.0
TATTGGCACC	GGCGGCACCA	TTCCAACAAT		50	60
			GGATCCCTAG	AAAAAGATGA	AGTCTTTGTC
70	80	90	100	110	120
CCACCTAAGA	AAGCTGCAGT	CANATGGTAT	GTCAAATACC	TCAACAACCC	TCTTGGACGC
130	140	150	160	170	180
ATTCTGGTGT	TAACAGTTCA	GTTTATCCTC	GGGTGGCCTT	TGTATCTAGC	CTTTAATGTA
190	200	210	220	230	240
TCAGGTAGAC	CTTATGATGG	TTTCGCTTCA	CATTTCTTCC	CTCATGCACC	TATCTTTAAG
250	260	270	280	290	300
GACCGTGAAC	GTCTCCAGAT	ATACATCTCA	GATGCTGGTA	TTCTAGCTGT	CTGTTATGGT
310	320	330	340	350	360
CTTTACCGTT	ACGCTGCTTC	ACAAGGATTG	ACTGCTATGA	TCTGCGTCTA	CGGAGTACCG
370	380	390	400	410	420
CTTTTGATAG	TGAACTTTTT	CCTTGTCTTG	GTCACTTTCT	TGCAGCACAC	TCATCCTTCA
430	440	450	460	470	480
TTACCTCACT	ATGATTCAAC	CGAGTGGGAA	TGGATTAGAG	GAGCTTTGGT	TACGGTAGAC
490	500	510	520	530	540
AGAGACTATG	GAATCTTGAA	CAAGGTGTTT	CACAACATAA	CAGACACCCA	CGTAGCACAC
550				2227.0007	OGINGCACAC
CAC					

Figure 5

10	20	30	40	50	60
TATAGGCACC	GGAGGCACCA	TTCCAACACA	GGATCCCTCG	AAAGAGATGA	AGTATTTGTC
70	80	90	100	110	120
CCAAAGCAGA	AATCCGCAAT	CAAGTGGTAC	GGCGAATACC	TCAACAACCC	TCCTGGTCGC
130	140	150	160	170	180
ATCATGATGT	TAACTGTCCA	GTTCGTCCTC	GGATGGCCCT	TGTACTTAGC	CTTCAACGTT
190	200	210	220	230	240
TCTGGCAGAC	CCTACAATGG	TTTCGCTTCC	CATTTCTTCC	CCAATGCTCC	TATCTACAAC
250	260	270	280	290	300
GACCGTGAAC	GCCTCCAGAT	TTACATCTCT	GATGCTGGTA	TTCTAGCCGT	CTGTTATGGT
310	320	330	340	350	360
CTTTACCGTT	ACGCTGTTGC	ACAAGGACTA	GCCTCAATGA	TCTGTCTAAA	CGGAGTTCCG
370	380	390	400	410	420
CTTCTGATAG	TTAACTTTTT	CCTCGTCTTG	ATCACTTACT	TACAACACAC	TCACCCTGCG
430	440	450	460	470	480
TTGCCTCACT	ATGATTCATC	AGAGTGGGAT	TGGCTTAGAG	GAGCTTTAGC	TACTGTAGAC
490	500	510	520	530	540
AGAGACTATG	GAATCTTGAA	CAAGGTGTTC	CATAACATCA	CAGACACCCA	CGTCGCACAC
550					
CACT					

CACT

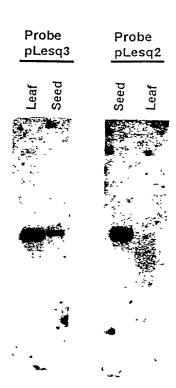


Figure 7

AT GAA GCT TTA TAA GAA GTT AGT TTT CTC TGG TGA CAG AGA AAT TNT 47 GTC AAT TGG TAG TGA CAG TTG AAG CAA CAG GAA CAA GGA TGG TTG 95 GTG NTG ATG CTG ATG TGG TGA TGT GTT ATT CAT CAA ATA CTA AAT ACT 143 ACA TTA CTT GCT GCC TAC TTC TCC TAT TTC CTC CGC CAC CCA TTT 191 TGG ACC CAC GAN CCT TCC ATT TAA ACC CTC TCT CGT GCT ATT CAC CAG 239 AAG AGA AGC CAA GAG AGA GAG AGA GAG AAT GTT CTG AGG ATC ATT GTC 287 TTC TTC ATC GTT ATT AAC GTA AGT TTT TTT TGA CCA CTC ATA TCT AAA 335 ATC TAG TAC ATG CAA TAG ATT AAT GAC TGT TCC TTC TTT TGA TAT TTT 383 Met Gly Ala Gly Gly Arg Ile Met Val Thr 10 CAG CTT CTT GAA TTC AAG ATG GGT GCT GGT GGA AGA ATA ATG GTT ACC 431 Pro Ser Ser Lys Lys Ser Glu Thr Glu Ala Leu Lys Arg Gly Pro Cys 26 CCC TCT TCC AAG AAA TCA GAA ACT GAA GCC CTA AAA CGT GGA CCA TGT 479 Glu Lys Pro Pro Phe Thr Val Lys Asp Leu Lys Lys Ala Ile Pro Gln 42 GAG AAA CCA CCA TTC ACT GTT AAA GAT CTG AAG AAA GCA ATC CCA CAG 527 His Cys Phe Lys Arg Ser Ile Pro Arg Ser Phe Ser Tyr Leu Leu Thr 58 CAT TGT TTC AAG CGC TCT ATC CCT CGT TCT TTC TCC TAC CTT CTC ACA 575 Asp Ile Thr Leu Val Ser Cys Phe Tyr Tyr Val Ala Thr Asn Tyr Phe 74 GAT ATC ACT TTA GTT TCT TGC TTC TAC TAC GTT GCC ACA AAT TAC TTC 623 Ser Leu Leu Pro Gln Pro Leu Ser Thr Tyr Leu Ala Trp Pro Leu Tyr 90 TCT CTT CCT CAG CCT CTC TCT ACT TAC CTA GCT TGG CCT CTC TAT 671 Trp Val Cys Gln Gly Cys Val Leu Thr Gly Ile Trp Val Ile Gly His 106 TGG GTA TGT CAA GGC TGT GTC TTA ACC GGT ATC TGG GTC ATT GGC CAT 719 Glu Cys Gly His His Ala Phe Ser Asp Tyr Gln Trp Val Asp Asp Thr 122 GAA TGT GGT CAC CAT GCA TTC AGT GAC TAT CAA TGG GTA GAT GAC ACT 767 Val Gly Phe Ile Phe His Ser Phe Leu Leu Val Pro Tyr Phe Ser Trp 138 GTT GGT TTT ATC TTC CAT TCC TTC CTT CTC GTC CCT TAC TTC TCC TGG 815 Lys Tyr Ser His Arg Arg His His Ser Asn Asn Gly Ser Leu Glu Lys 154 AAA TAC AGT CAT CGT CGT CAC CAT TCC AAC AAT GGA TCT CTC GAG AAA 863 Asp Glu Val Phe Val Pro Pro Lys Lys Ala Ala Val Lys Trp Tyr Val 170 GAT GAA GTC TTT GTC CCA CCG AAG AAA GCT GCA GTC AAA TGG TAT GTT 911 Lys Tyr Leu Asn Asn Pro Leu Gly Arg Ile Leu Val Leu Thr Val Gln 186 AAA TAC CTC AAC AAC CCT CTT GGA CGC ATT CTG GTG TTA ACA GTT CAG 959

Figure 8A

Phe Ile Leu Gly Trp Pro Leu Tyr Leu Ala Phe Asn Val Ser Gly Arg 202 TIT ATC CTC GGG TGG CCT TTG TAT CTA GCC TTT AAT GTA TCA GGT AGA 1007 Pro Tyr Asp Gly Phe Ala Ser His Phe Phe Pro His Ala Pro Ile Phe 218 CCT TAT GAT GGT TTC GCT TCA CAT TTC TTC CCT CAT GCA CCT ATC TTT 1055 Lys Asp Arg Glu Arg Leu Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu 234 AAA GAC CGA GAA CGC CTC CAG ATA TAC ATC TCA GAT GCT GGT ATT CTA 1103 Ala Val Cys Tyr Gly Leu Tyr Arg Tyr Ala Ala Ser Gln Gly Leu Thr 250 GCT GTC TGT TAT GGT CTT TAC CGT TAC GCT GCT TCA CAA GGA TTG ACT 1151 Ala Met Ile Cys Val Tyr Gly Val Pro Leu Leu Ile Val Asn Phe Phe 266 GCT ATG ATC TGC GTC TAT GGA GTA CCG CTT TTG ATA GTG AAC TTT TTC 1199 Leu Val Leu Val Thr Phe Leu Gln His Thr His Pro Ser Leu Pro His 282 CTT GTC TTG GTA ACT TTC TTG CAG CAC ACT CAT CCT TCG TTA CCT CAT 1247 Tyr Asp Ser Thr Glu Trp Glu Trp Ile Arg Gly Ala Leu Val Thr Val 298 TAT GAT TCA ACC GAG TGG GAA TGG ATT AGA GGA GCT TTG GTT ACG GTA 1295 Asp Arg Asp Tyr Gly Ile Leu Asn Lys Val Phe His Asn Ile Thr Asp 314 GAC AGA GAC TAT GGA ATA TTG AAC AAG GTG TTC CAT AAC ATA ACA GAC 1343 Thr His Val Ala His His Leu Phe Ala Thr Ile Pro His Tyr Asn Ala 330 ACA CAT GTG GCT CAT CTC TTT GCA ACT ATA CCG CAT TAT AAC GCA 1391 Met Glu Ala Thr Glu Ala Ile Lys Pro Ile Leu Gly Asp Tyr Tyr His 346 ATG GAA GCT ACA GAG GCG ATA AAG CCA ATA CTT GGT GAT TAC TAC CAC 1439 Phe Asp Gly Thr Pro Trp Tyr Val Ala Met Tyr Arg Glu Ala Lys Glu 362 TTC GAT GGA ACA CCG TGG TAT GTG GCC ATG TAT AGG GAA GCA AAG GAG 1487 Cys Leu Tyr Val Glu Pro Asp Thr Glu Arg Gly Lys Lys Gly Val Tyr 378 TGT CTC TAT GTA GAA CCG GAT ACG GAA CGT GGG AAG AAA GGT GTC TAC 1535 Tyr Tyr Asn Asn Lys Leu 384 TAT TAC AAC AAT AAG TTA TGA GGC TGA TAG GGC GAG AGA AGT GCA ATT 1583 ATC AAT CTT CAT TTC CAT GTT TTA GGT GTC TTG TTT AAG AAG CTA TGC 1631 TIT GIT TCA ATA ATC TCA GAG TCC ATN TAG TTG TGT TCT GGT GCA TTT 1679 TGC CTA GTT ATG TGG TGT CGG AAG TTA GTG TTC AAA CTG CTT CCT GCT 1727 GTG CTG CCC AGT GAA GAA CAA GTT TAC GTG TTT AAA ATA CTC GGA ACG 1775 AAT TGA CCA CAA NAT ATC CAA AAC CGG CTA TCC GAA TTC CAT ATC CGA 1823 AAA CCG GAT ATC CAA ATT TCC AGA GTA CTT AG 1855

Figure 8B

```
10 20 30 40
          1 MGAGGRIM-- --VTPSSKKS --ETEALKRG PCEKPPFTVK DLKKAIPQHC
LFFAH12
                                                                   50
FAH12
          1 MGGGGRMSTV ITSNNSEKKG --GSSHLKRA PHTKPPFTLG DLKRAIPPHC
                                                                    50
         1 MGAGGRMP-- -- VPTSSKKS -- ETDTTKRV PCEKPPFSVG DLKKAIPPHC
                                                                   50
ATFAD2
BNFAD2
          1 MGAGGRMO-- --VSPPSKKS --ETDNIKRV PCETPPFTVG ELKKAIPPHC
         1 MGLA-KETTM GGRGRVAKVE VQGKKPLSRV PNTKPPFTVG QLKKAIPPHC
GMFAD2-1
                                                                   50
                                                                   50
          1 MGAGGR---- TDVPPANRKS --EVDPLKRV PFEKPQFSLS QIKKAIPPHC
GMFAD2-2
         1 MGAGGRMTEK EREKQEQLAR ATGGAAMQRS PVEKPPFTLG QIKKAIPPHC
                                                                   50
ZMFAD2
RCFAD2
         1 --------
                                                                   50
            60 70 80 90 100
         51 FKRSIPRSFS YLLTDITLVS CFYYVATNYF SLLPQPLSTY LAWPLYWVCQ
LFFAH12
                                                                   100
         51 FERSFVRSFS YVAYDVCLSF LFYSIATNFF PYISSPLS-Y VAWLVYWLFQ
FAH12
                                                                   100
         51 FKRSIPRSFS YLISDIIIAS CFYYVATNYF SLLPQPLS-Y LAWPLYWACQ
ATFAD2
                                                                   100
         51 FKRSIPRSFS HLIWDIIIAS CFYYVATTYF PLLPNPLS-Y FAWPLYWACQ
BNFAD2
                                                                   100
GMFAD2-1 51 FQRSLLTSFS YVVYDLSFAF IFY-IATTYF HLLPQPFS-L IAWPIYWVLQ
                                                                  100
GMFAD2-2 51 FQRSVLRSFS YVVYDLTIAF CLYYVATHYF HLLPGPLS-F RGMAIYWAVQ
                                                                  100
ZMFAD2 51 FERSVLKSFS YVVHDLVIAA ALLYFALAII PALPSPLR-Y AAWPLYWIAQ RCFAD2 51 ------
                                                                  100
         51 -----
RCFAD2
                                                                   100
         110 120 130 140
                                                                  150
LFFAH12 101 GCVLTGIWVI GHECGHHAFS DYQWVDDTVG FIFHSFLLVP YFSWKYSHRR
                                                                  150
FAH12 101 GCILTGLWVI GHECGHHAFS EYQLADDIVG LIVHSALLVP YFSWKYSHRR
        101 GCVLTGIWVI AHECGHHAFS DYQWLDDTVG LIFHSFLLVP YFSWKYSHRR
ATFAD2
                                                                  150
        101 GCVLTGVWVI AHECGHAAFS DYQWLDDTVG LIFHSFLLVP YFSWKYSHRR
                                                                  150
BNFAD2
GMFAD2-1 101 GCLLTGVWVI AHECGHHAFS KYQWVDDVVG LTLHSTLLVP YFSWKISHRR
                                                                  150
GMFAD2-2 101 GCILTGVWVI AHECGHHAFS DYQLLDDIVG LILHSALLVP YFSWKYSHRR
                                                                  150
ZMFAD2
      101 G----- ----AFS DYSLLDDVVG LVLHSSLMVP YFSWKYSHRR
                                                                  150
RCFAD2
        101 -----WVM AHDCGHHAFS DYQLLDDVVG LILHSCLLVP YFSWKHSHRR
                                                                   150
               160 170 180
                                          190 200
LFFAH12 151 HHSNNGSLEK DEVFVPPKKA AVKWYVKYL- NNPLGRILVL TVQFILGWPL
                                                                  200
        151 HHSNIGSLER DEVFVPKSKS KISWYSKYS- NNPPGRVLTL AATLLLGWPL
FAH12
                                                                   200
ATFAD2
        151 HHSNTGSLER DEVFVPKQKS AIKWYGKYL- NNPLGRIMML TVQFVLGWPL
                                                                   200
       151 HHSNTGSLER DEVFVPR-RS QTSSGTAST- STTFGRTVML TVQFTLGWPL
BNFAD2
                                                                  200
GMFAD2-1 151 HHSNTGSLDR DEVFVPKPKS KVAWFSKYL- NNPLGRAVSL LVTLTIGWPM
                                                                  200
GMFAD2-2 151 HHSNTGSLER DEVFVPKQKS CIKWYSKYL- NNPPGRVLTL AVTLTLGWPL
                                                                  200
       151 HHSNTGSLER DEVFVPKKKE ALPWYTPYVY NNPVGRVVHI VVQLTLGWPL
ZMFAD2
                                                                  200
        151 HHSNTGSLER DEVFVPKKKS SIRWYSKYL- NNPPGRIMTI AVTLSLGWPL
RCFAD2
                                                                  200
                                     230
                  210
                           220
                                                240
                                                                  250
LFFAH12 201 YLAFNVSGRP YDG-FASHFF PHAPIFKDRE RLQIYISDAG ILAVCYGLYR
FAH12
        201 YLAFNVSGRP YDR-FACHYD PYGPIFSERE RLQIYIADLG IFATTFVLYQ
                                                                  250
        201 YLAFNVSGRP YDG-FACHFF PNAPIYNDRE RLQIYLSDAG ILAVCFGLYR
ATFAD2
                                                                  250
        201 YLAFNVSGRP YDGGFACHFH PNAPIYNDRE RLQIYISDAG ILAVCYGLLP
                                                                  250
BNFAD2
GMFAD2-1 201 YLAFNVSGRP YDS-FASHYH PYAPIYSNRE RLLIYVSDVA LFSVTYSLYR
                                                                  250
                                                                 250
250
250
GMFAD2-2 201 YLALNVSGRP YDR-FACHYD PYGPIYSDRE RLQIYISDAG VLAVVYGLFR
ZMFAD2 201 YLATNASGRP YPR-FACHFD PYGPIYNDRE RAQIFVSDAG VVAVAFGLYK
RCFAD2 201 YLAFNVSGRP YDR-FACHYD PYGPIYNDRE RIEIFISDAG VLAVTFGLYQ
```

Figure 9A

			_		000	200	
		260	270	280	290	300	202
LFFAH12	251	YAASQGLTAM			LQHTHPSLPH		300
FAH12	251	ATMAKGLAWV	MRIYGVPLLI	VNCFLVMITY	LOHTHPAIPR		300
ATFAD2	251	YAAAQGMASM	ICLYGVPLLI	VNAFLVLITY	LOHTHPSLPH		300
BNFAD2	251	YAAVQGVASM	VCFLRVPLLI	VNGFLVLITY	LQHTHPSLPH	YDSSEWDWLR	300
GMFAD2-1	251	VATLKGLVWL	LCVYGVPLLI	VNGFLVTITY	LQHTHFALPH		300
GMFAD2-2	251	LAMAKGLAWV	VCVYGVPLLV	VNGFLVLITF	24	YTSSEWDWLR	300
ZMFAD2	251	LAAAFGVWWV	VRVYAVPLLI	VNAWLVLITY	LOHTHPSLPH	YDSSEWDWLR	300
RCFAD2	251	LAIAKGLAWV	VCVYGVPLLV	VNSFLVLITF	LOHTHPALPH	YDSSEWDWLR	300
		310	320	330	340	350	
LFFAH12	301	GALVTVDRDY	GILNKVFHNI		ATIPHYNAME		350
FAH12	301	GAMVTVDRDY	GVLNKVFHNI	,	ATVPHYHAME		350
ATFAD2	301	GALATVDRDY	GILNKVFHNI	TDTHVAHHLF	STMPHYNAME	ATKAIKPILG	350
BNFAD2	301	GALATVDRDY	GILNQGFHNI	TDTHEAHHLF			350
GMFAD2-1	301	GALATMDRDY	GILNKVFHHI		STMPHYHAME		350
GMFAD2-2	301	GALATVDRDY	GILNKVFHNI	TDTHVAHHLF	STMPHYHAME	ATKAIKPILG	350
ZMFAD2	301	GALATMDRDY	GILNRVFHNI	TDTHVAHHLF	STMPHYHAME	ATKAIRPILG	350
RCFAD2	301	GALATVDRDY	GILNKVFHNI	TDTQVAHHLF			350
		360	370	380	390		
LFFAH12	351	DYYHFDGTPW	YVAMYREAKE	CLYVEPDTER	GKKGVYYYNN	K-L	400
FAH12	351	EYYRYDGTPF	YKALWREAKE	CLFVEPDEGA	PTQGVFWYRN	KY	400
ATFAD2	351	DYYOFDGTPW	YVAMYREAKE	CIYVEPDREG	DKKGVYWYNN	K-L	400
BNFAD2	351		VKAMWREAKE			KL*	400
GMFAD2-1	351	EYYQFDDTPF	YKALWREARE	CLYVEPDEGT	SEKGVYWYRN	KY	400
GMFAD2-2	351	EYYRFDETPF	VKAMWREARE	CIYVEPDQST	ESKGVFWYNN	KL	400
7MCAD2	251	DVVUEDDTDV					400

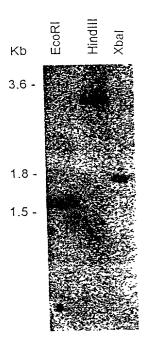
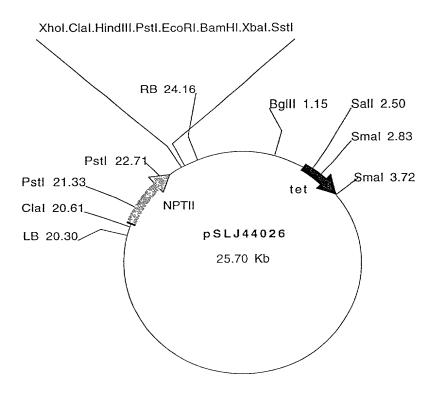


Figure 10



Plasmid name: pSLJ44026 Plasmid size: 25.70 kb

Constructed by: Jonathon Jones

Construction date: 1992

Comments/References: Transgenic Research 1,285-297 (1992)

Figure 11

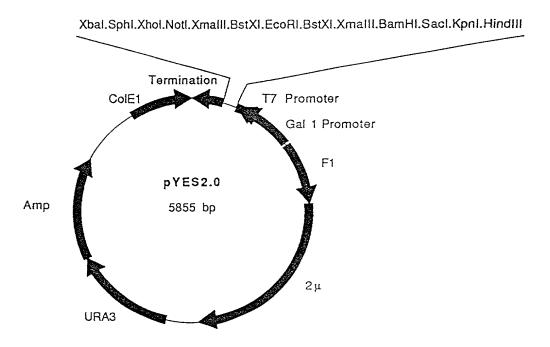


Figure 12

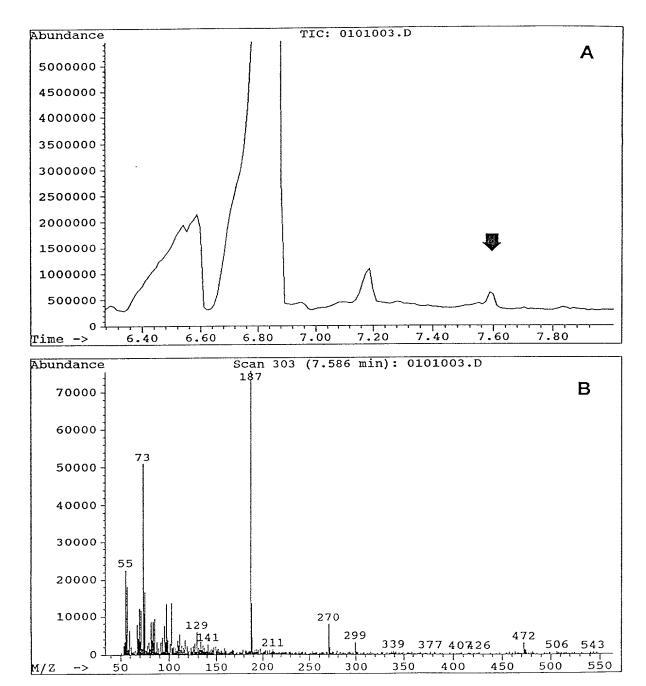


Figure 13